**Lecture 12: Visual Semantics for Visual Communication
(Contd.)**

Hello students welcome back to our course on visual semantics, or semiotics for visual communication. So in our last class we looked into signs and the different relationship between signs, object, and the interpreter, and based on that we are making lot of meaning or we are making a fruitful communication through that. Today we will look at one very, very important aspect of visual perception and which is very deeply related to cognitive and psychology. And that decides or that is a deciding factor for our visual arrangement that is how we perceive and make meaning based on certain logic so that is called the distance principle of perception.

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So today we will talk about the distal school of psychology, or just digitalism it is known by various nomenclatures. But basically the and distance was a group of people or group of scientists, psychologists all of them coming together and then proposing a law are some kind of principles related to psychology or the way we perceive or grouping all of it together. And based on that be heavily the designers communicators heavily bank on gestelltisum. And there are established laws for our various needs, for our communicational need.
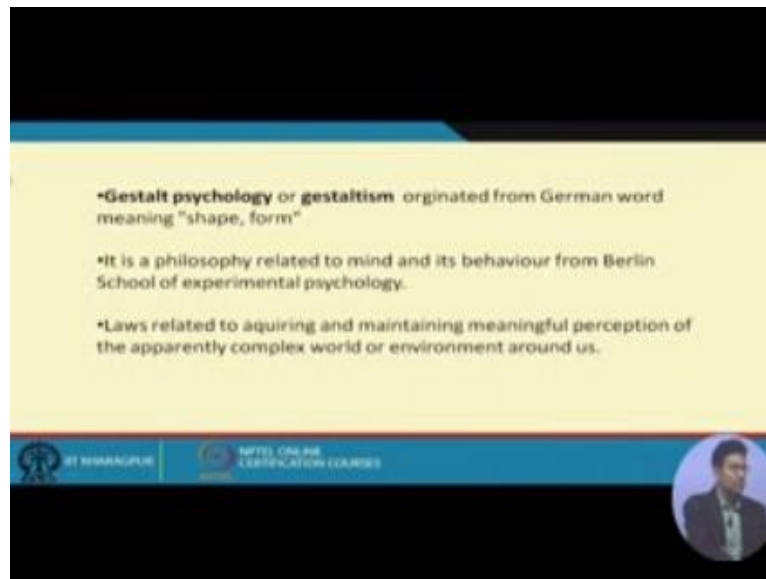
So if you look at how it all evolves a distal psychology, or distal gestaltism originated from a German word, so the stalls is a origin it has its origin in the German word, and which is related to shape or form. So when during inception people started looking at various shapes and forms the visual shapes and visual form and they were looking at how this evolved and what kind of relationship they had, so that was the starting point of gestaltism or digital psychology for that matter and the scientists that time realized that there are particular order or particular pattern which works in the background of Cindy forms of seeing the shape together.

And that is how the term evolved and then later on it took lot of concrete shape and lot of new theories came into picture, and this was a philosophy so it started as a philosophy related to mind and its behavior and this was developed in boarding school of Experimental Psychology. So there people were looking at how the minds work and how the minds behave and observe basically these shapes and forms. And that is how it started you know evolving as I discussed so.

That has the basis of this gestaltism and the laws which are related to gestaltism is used for acquiring, and maintaining meaningful perception of apparently complex world or environment around us. So basically around us we are experiencing the world, we are experiencing lot of

objects through our eyes through various other senses. We are experiencing these things and it is very complex as you can understand. Vision alone is such a complex domain to understand the light stimuli it is reflective getting reflected on the environment, falling into our eyes getting absorbed by the retina and then processing it.

So it is taking up all sort of signals which are possible all that is visually there in your visual field so this is this we called field of vision. Whatever is there you are everything is getting registered in your eyes but then how do you acquire meaningful information, how do you maintain getting this information and they take certain decisions every moment, we are taking some decisions based on our perception be it any census eighty percent is visual senses. That we encounter and based on that we are you know taking you know, we are perceiving that and taking some kind of decision, doing some action and things like that we are learning things, we are recognizing things we are doing things based on all that.

But then the question comes how do we acquire it, what is the signs, what is the law, related to it what is which is happening at the background in the mind so it is a very, very interesting facet of human mind which we are trying to deep dive today and understand. Why a mind looks at certain things in a particular way or at least understand this pattern so that exactly what the gestal law is doing and in principle it is very, very simple why it is happening and how it is happening principally. That very simple and I will tell you the logic of this the logic of this is human mind wants to achieve maximum efficiency.

So you want to do less of work over here, so you do not want to spend too much time, you do not want to spend too much of energy, in your brain and you want to take the decision bang you want to arrive at the task to be done quickly that is all. What we as living organisms is trying to do and more so with intelligent creature as human beings and in order to do that what do we rely on we rely on certain patterns. So this is how we are relying on our environment so we look at the environment first time you are looking at the environment will spend a lot of time in understanding its syntax.

In making meaning in understanding that particular sign how it is messing with the object and then you make a meaning out of it we will first timers you will take a lot of time doing this. So this is what is called the cognitive process you are learning that thing, so you are spending time or syntax you are spending time on semantics and then you have seen that you being used over course of time, so you have used one particular say a toilet signage you have used it once you have seen it in an airport you have seen it again somewhere else.

So next time you see that particular image your mind will not spend even a millisecond further in trying to look at the syntax, look at the meaning, and things like that. It will immediately look at the pattern and take a decision that is the toilet and that, that is how it is to be used and in and you take a decision based on that so what is happening here is you are recognizing that pattern and you do not spend for the time. So that is the principle which it is happening at the background and how is that principle happening that principle is happening with the concept that you look at things overall okay.

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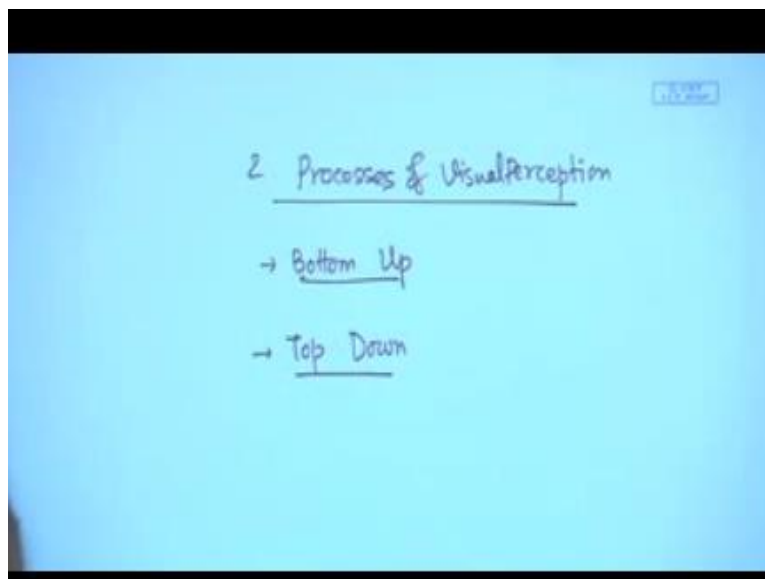
So this is called the top-down and bottom-up approach in perception, so there are two different types of visual perception process of visual perception. So there are two processes of visual

perception so these two processes are first one is called the bottom-up process and the other one is called the top down process. So as the name suggests as bottom up and there is top down, so what is happening in a bottom-up process is the riff the light is reflecting from the environment and object around us it is falling into a retina and you are analyzing each and every stimuli that is falling into your rating us.

So this is the bottom of process small bits and pieces coming you are gathering those information and hence you are trying to understand the meaning and doing that process, so it is going by the syntax, semantics, and pragmatics mode. So you have seen say for example again take the toilet sinus looked at the syntax you looked at all the form and everything first time you look at that image then you understood the meaning, you made association with the object and made meaning out of it and then you see okay.

Every time you see this sign it, it is not just representing a man or a woman but it is related to a toilet or a particular usage for a particular gender so it is something which you actually experience used and hence you know the implications of that. So that creates the entire understanding of semiotic or the semiotic landscape is complete over here okay. So this is how which is happening all the time but this is the bottom of process first time you see the bottom of process worked but this is another process which is working in action and that is the top down process.

Where your surrounding environment your intentions, your aspirations, your experience, also play a very, very important role say for example, now you see the same image in an airport or a railway station uses will not spend even a millisecond to go through this process because this is something which is part and parcel of your expectations, experience and things like that. You know that this is very, very obvious thing to be present in a railway station but imagine you see this kind of a sign it in, in an open-air or in a jungle or in some other places it is not very familiar.

Where you see this kind of sign it probably will spend a little bit more of extra time on this or maybe the syntax is very, very different the object drawn the representation is very, very

different probably will spend some more time using your experience. Maybe this particular image which is there on the toilet you are watching this image in a particular culture, say in, in, in, turkey okay.

In turkey in a Middle Eastern country this is being represented the syntax is very, very different and you will spend some extra time to understand through your experiences where you are, how you are. So this is the top down process which is taking place, so all of it together gives an understanding of the distance psychology which is happening at the background. So if you look at I try to put it together in terms of some bullet points.

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So here human mind perceives through simplification, and less effort that is what we talked about. So human mind always wants to do less of words put little less of effort and make a system efficient. So this is what is the domain of that and then mind understand sorry there should be a gap over here so mind understands external stimuli as a whole rather than some of their parts. So when I talked about the bottom of process and the top down process they both are working together so at an instant the stimuli is falling into your eye, but then you are looking at it as a whole you are looking at it as a pattern.

And you make a decision rather than you are looking at all different parts and then taking a decision what it is. So basically many a times we are trying to look at whole as a pattern and try to understand make meaning take some judgment take some decisions based on that, and the overall pattern is subjected to a quick consumption this is something we are looking at that we try to consume this overall pattern rather than some of smaller pattern. So you are trying to consume the whole thing at once make a meaning rather than you know assuming its smaller parts many a times we do that.

When we see something very unfamiliar or seeing it for the first time we tend to do that but not always so now, let us come to the six laws or principles according to gestalt psychology for the perception or grouping of things so we will talk of each of the six laws one by one so if we look at the six laws.

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So these are the six laws we will talk about so the first one, I will just read it out right now but we will look each of them in separation so one is the law of proximity, and law of similarity, law

of closure, law of symmetry, law of continuity and loss common fate. So we will go by one by one for this the first one we encountered is called the law of proximity.
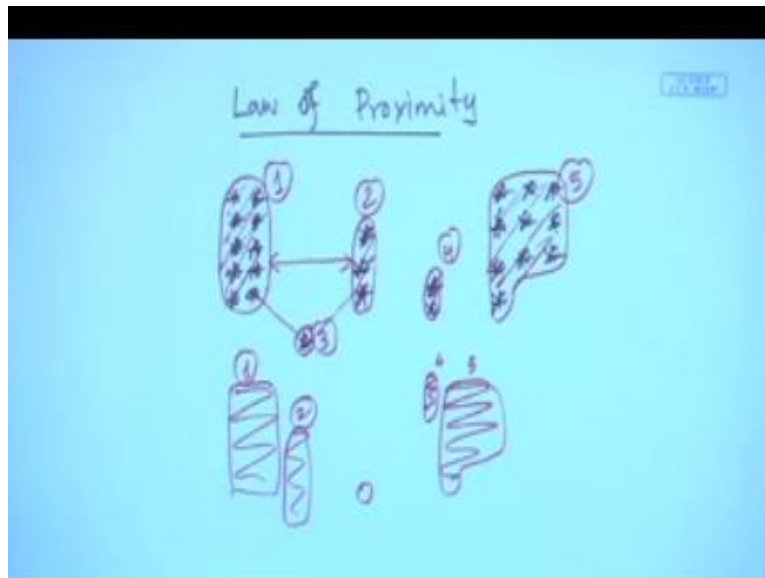
So the law of proximity what is suggests is that in your visual frame if you have things in proximity you tend to see them as one object so I am drawing some kind of things on your visual field. So let me draw some of these things then you will understand how it works so if we look at this particular visual field, now what we did is we have certain objects we have some element so in terms of semantics we syntax we have lot of elements and we have arranged those elements over here and this arrangement has a particular order.

You can see that they're in close proximity and the things which are in close proximity now ha when you look at this how are you looking at this you are bunching it together see you are looking at this as one element you are looking at this as another element this, this so this is exactly how you have looked at the entire visual field. So what essentially it means is that when you have various elements coming together like this the law of proximity is driving you to punch it together you are not looking at its part you have.

If I now ask you how many starts did you see how many elements did you see when I did this group you would not be able to relate but if I say how many things how many regions you have seen you would be able to say I have seen four or five regions and there was one element which are separated out. Why is that happening it is happening to this law of proximity so what the mind does it as soon as I look into the visual fabric it will immediately try to punch things which are in proximity.

So which is a very, very important aspect for visual design for visual communication when you have a blank canvas in front of you how you are proximizing the thing so things you are putting in close proximity will tend to become one thing and other things tend to become other things. So if you look at this canvas in particular this becomes one thing this becomes another thing it is another and this another so. If say for example you have a connection between these you cannot if you want people to look at them together or have some kind of connection between two law of proximity will stop you from doing this.

So in that case what you have to do is you have to bring these two chunks together and then maybe this is one element, and these two chunks together viewing to your design if, if I turn this one, two, three, four, and five according to your communicational need. If I want one and two to be seen together there has to be brought in proximity only then I will see them together otherwise I will tend to see one then three then two then four and then five. So again if four and five you has to be looked together there has to be brought in proximity.

So proximity play a very, very important role when you are designing this is one example I can show you is when you are looking at a website how different chunks of information are placed in proximity, so if you have a chunk of information here and the chunk of information it not in proximity. But you want people to look at it together there will be a difference that is how menus are bunched the navigation tools are bunched together. So that they are in proximity and you know one step by step what needs to be done. These are some practical examples where you use this but fundamentally this is what law of proximity does.
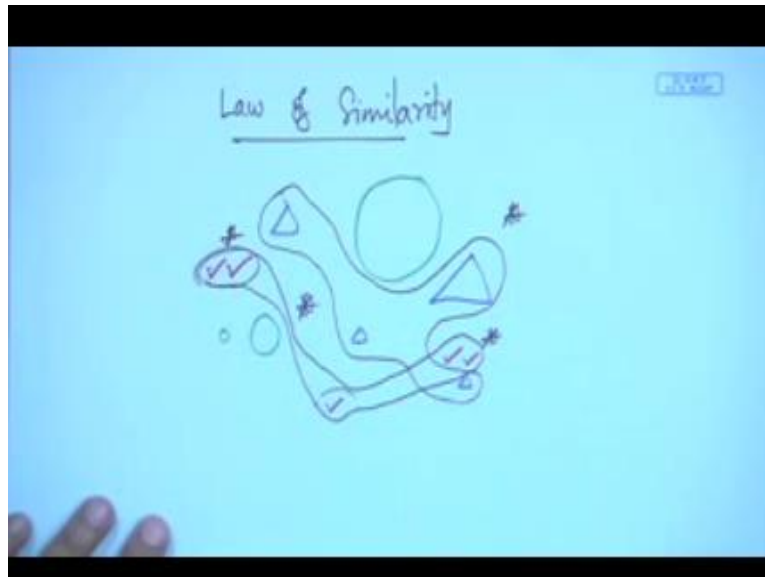
Now we come to something which is known as law of similarity, so as the name suggests the law of similarity is based on theory again have a canvas over here, and we start putting the elements over here. I will take a different color and now you are trying you are seeing that I am putting lot of different shapes. And we have drawn certain objects or elements over here so in proximity we saw that things which are in proximity we try to punch them together so that law is working but here how are you grouping this object. So if you look carefully you will immediately start grouping objects which have similarity, similarity going to shape similarity owing to orientation or similarity by many other factors you start grouping them.

So one is the proximity which plays into picture but at the same time you tend to visually bunch them together and you look at them together. So this is called law of similarity and that is achieved by various means so here comes your knowledge of elements of design we where you look at colors textures rhythm pattern. So the similarity could be based on many aspects of design but the idea that the key concept that you should keep in mind is the similar objects which is there in your viewing field or field of vision people will tend to look at them together.

So this particular concept or aspect is again used in many of the web applications just to give you an example where you put many elements similar elements or you connect them with color say you have a navigation tool at the top and the left at the top and the bottom you have similarity of colors. Which creates the similarity between these navigational aspects so this is how many a times apart from proximity where you cannot provide proximity owing to certain regions of your design you bring this concept of similarity

And people will tend to look at it together so many a times that you are designing we heavily Bank on the proximity and the similarity and there is a very, very important aspect do not bring too many elements together then what happens is if you look at this element if I if I bring in too many elements together the mind gets puzzled and it no longer can create these holes. So we talked about we look we tend to look at whole rather than coming of the parts so the mind will have difficulty in perceiving this and creating as a hole and then decoding it.

So that will go again that will increase is semantic differences or the gap it will increase the effort on the mind and hence this kind of problem will take place. So now we look at the third law which is the law of closure which is a pretty much simple to understand which is a very, very important aspect of human mind where we assume if you remember in our very first class we talked about assumption as a code to human communication we assume lot of things so many a times when a particular form is not complete incomplete but we close it we our mind 10to close it up and then look at it as a whole to give you an example a classic example in many of the cases you will see that.
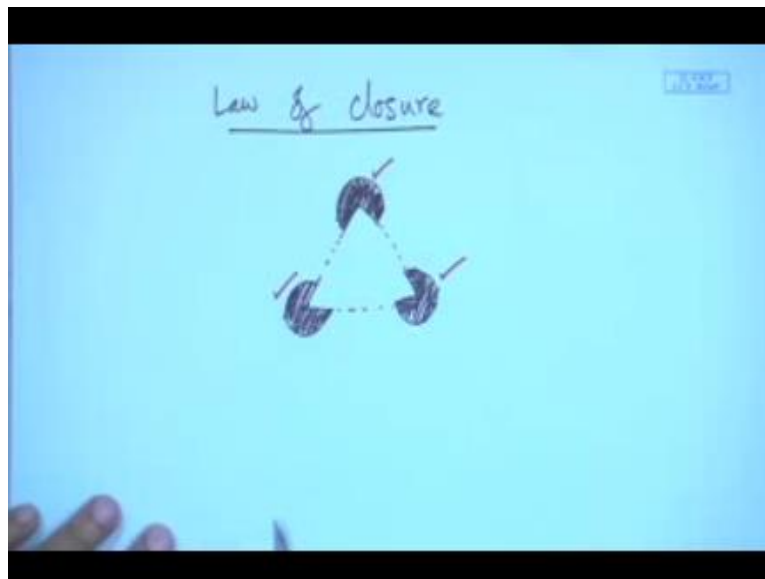
I am just showing you one example over here so I have drawn some object and I am coloring it up so I am like making it black in color so what do you see over here so if I show you this now what do you see you are seeing this particular object even if I have not drawn in what I have drawn is one two and three. I have drawn something which is a different object altogether but our mind does the other part so this is a very, very interesting law which works in our mind and which also supports the concept of we tend to look apart. We tend to do a top-down approach process of vision also apart from the bottom of vision.

So here you are looking at if the stimuli wise we look at we would have just seen you know three pizza chunk 3 circles we can eat enough had it been only bottom-up process but now we are utilizing our past experiences our expectations and things like that. We know how a triangle is and our mind is closing this so our mind is closing a thing which we have not even drawn and this is happening all the time based on our visual assumptions.

So this is also another principle or law which we use when we are doing a visual design many a times we do not complete everything we keep certain things open and interpretation or closer by the interpreted or the observer, observer so we use that and this is also happening in our visual

domain now we come to the next law which says the law of symmetry so we have talked about symmetry when we were talking about principles of design.
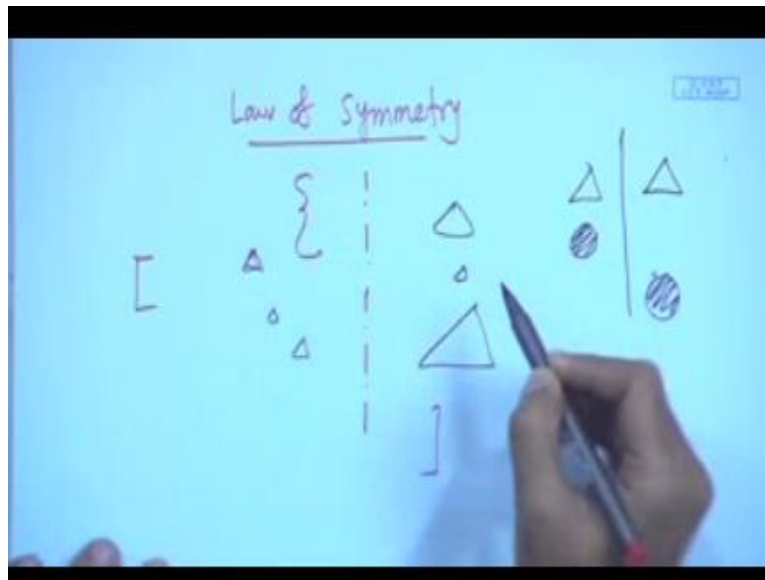
So symmetry something where we have an axis and we are balancing it, it is like a mirror thing so you have a hypothetical axis and even if you have something here you have another object here which is balancing it so this is a symmetrical form that we talked about and the law is pretty much simple to understand. So in our visual domain if we have some object say if we do this immediately our mind will create a virtual axis and start looking at it in terms of symmetry so we tend to find out search out symmetry in an object.

So in an inner in a visual representation say for example many a times when we ask you to look into cloud or look into a pattern many a time you observe of fate or an animal or things like that so why is that happening, because you are trying to find out a balance between the patterns that you are seeing. So you are trying to draw an axis you will imagine this to be one I this could be a nose or something else and you are punching it together and seeing it as a whole so if I use this and this, this and this, this and this you will definitely look at it as asymmetrical combination.

And you start putting it together and looking at it as a whole and hence decipher this particular or make interpretation of this particular visual so this is what is called the law symmetry. So you are searching for symmetry and the mismatch of symmetry if you cannot search the symmetry you get disturbed many of the visual artists and visual designers intentionally create this lack of harmony or lack of symmetry to create tension too for users to spend more attention to your artwork or your visual design.

Where you tend to spend more time in understanding the asymmetry rather than trying to understand the symmetry at one go so many a times these laws are used in support or in what is in clash with each other to create certain desired effect now we talked about the last two laws in current in continuation to this, so the fourth law we are going to talk about is law of continuity

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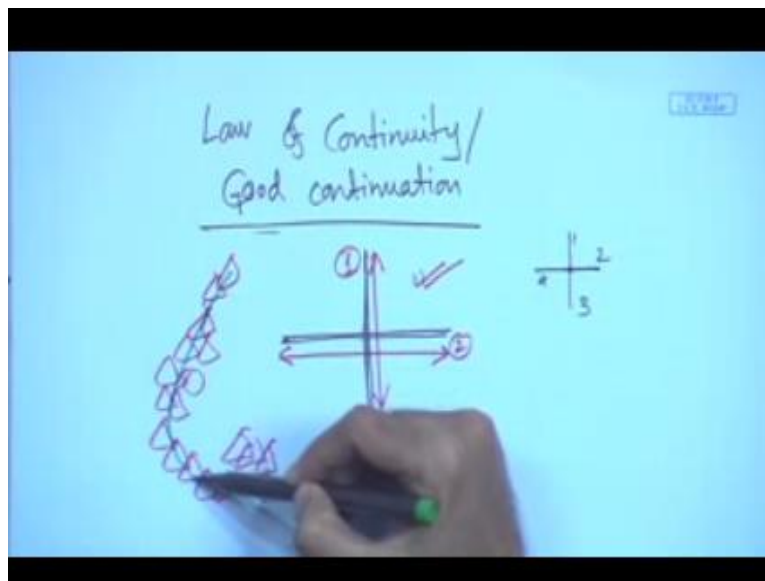
Or many a times it is called law of good continuation so you call it good continuation. So what it essentially means is that when you have objects or forms with are intermingled they are they are merged with one another you tend to observe the form which are apparently following a smooth curvature or a smooth what you say a lie in order direction. So to give you an example I am drawing one line here and another line here so how do you look at this particular object that I

have drawn are you looking at it as four lines one line here another line here another line here and another

So is it like one, two, three, four lines joining at one point is it the way you are seeing or are you seeing it as one line intersecting with another line. So basically you have one object and to object so this is the correct form that you are looking at right so what it essentially means is when you have elements merging with each other and if you find a simplistic line if you find a simplistic direction you tend to follow that direction rather than breaking it and looking at the different parts like I have shown you the sign you are not looking at four different quadrants or four different lines.

And then making a judgment rather you are making a judgment these are two lines which are intersecting is in it amazing power that our mind has, where if you have a complex object say for example you have lot of elements connected up together this proximity the similarity and the stuff like that working together say. I make something like this but still your mind will take a simplistic path connecting all of them together maybe something like this.

And it will start following this so this is something our mind does on our behalf and we start looking at is as a continuity this is also heavily used by various artists various visual designer sin their design so now coming to last but not the least there are different types of laws and psychology associated if any of you are interested you can read that in detail but we come to the sixth and the last one is the law of common fate.

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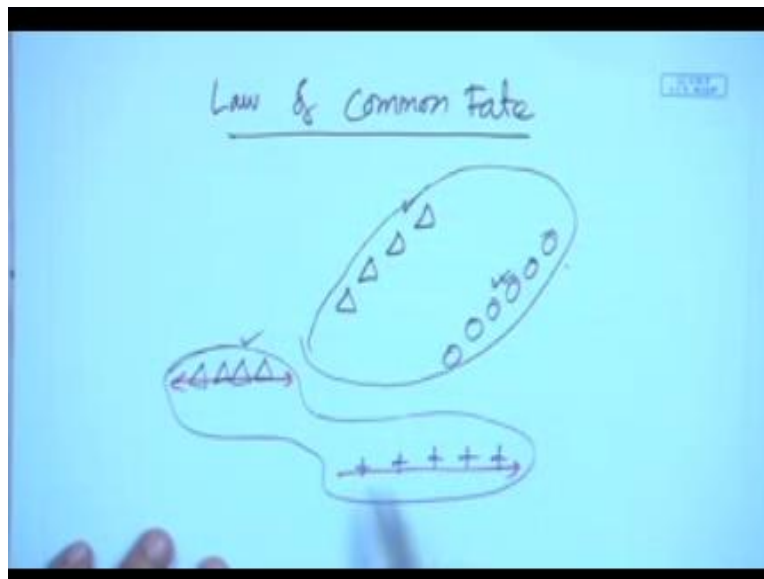
So we love common fate or law of commonality or common direction what it says is that if you have different elements and they follow some kind of directional attribute. You tend to club them together so in other words elements having similar direction, so I have this and this and this so if you look at this visual arrangement there is similarity as you can see there is proximity which is playing into picture, but something else is happening here is the common fate or the common direction.

So you tend to bunch these two things together as well and you tend to bunch these two things together as well going to its commonality of direction. So something following similar fate or similar direction often you tend to club them together and that is what you are calling it as law of common fate. So all of them together come I mean many at times they all of them play together many a time some is playing predominantly over the other but this six justice law are happening all the time or, we are encountering this these laws are these principles of perception in our visual communication thank you very much for your patient listening.